



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,586	10/27/2003	Ekambar R. Kandimalla	HYB-005US5	3762
7590 WAYNE A. KEOWN SUITE 1200 500 WEST CUMMINGS PARK WOBURN, MA 01801				
12/10/2009				
EXAMINER				
HORNING, MICHELLE S				
ART UNIT		PAPER NUMBER		
1648				
MAIL DATE		DELIVERY MODE		
12/10/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/694,586

Applicant(s)

KANDIMALLA ET AL.

Examiner

MICHELLE HORNING

Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20, 21, 41, 42, 46 and 47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20, 21, 41, 42, 46 and 47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This Office action is responsive to communication filed 11/4/2009. The status of the claims is as follows: claims 20, 21, 41, 42, 46 and 47 are under current examination.

Any rejection(s) not reiterated herein has been withdrawn.

Terminal Disclaimer

The terminal disclaimer filed on 11/4/2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 7276489 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 20, 21 and 41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 20 and 21 are drawn to an immunostimulatory compound comprising a non-natural pyrimidine nucleoside C*.

The following quotation from section 2163 of the MPEP is a brief discussion of what is required in a specification to satisfy the 35 U.S.C. 112 written description requirement for a generic claim covering several distinct inventions:

The written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice (see i)(A), above), reduction to drawings (see i)(B), above), or by disclosure of relevant, identifying characteristics, i.e., structure or other physical and/or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the claimed genus (see i)(C), above). See *Eli Lilly*, 119 F.3d at 1568, 43 USPQ2d at 1406.

A "representative number of species" means that the species which are adequately described are representative of the entire genus. Thus, when there is substantial variation within the genus, one must describe a sufficient variety of species to reflect the variation within the genus.

Thus, when a claim covers a genus of inventions, the specification must provide written description support for the entire scope of the genus. Support for a genus is generally found where the applicant has provided a number of examples sufficient so that one in the art would recognize from the specification the scope of what is being claimed or through disclosure of a functional characteristic of the claimed genus coupled with a known or disclosed non-functional characteristic (structure) that correlates to the function.

As noted above, the claims are drawn to an immunostimulatory compound comprising a non-natural pyrimidine nucleoside C*. A non-natural pyrimidine nucleoside would encompass *any* modified pyrimidines, including a modified thymine, a modified uracil, a barbiturate etc. The instant specification fails to provide any structure to function correlations for a reasonable number of species that would support the entire genus of "a non-natural pyrimidine nucleoside". The instant specification provides evidence that a modified C* in a CpG sequence provides differential effects compared

to an unmodified C in a CpG sequence. See, for example, Figures 1 and 2 which depict differential effects, such as the resulting proliferation index or spleen weight, for a modified C* and an unmodified C in a CpG sequence. The specification also teaches that some replacements of the deoxynucleosides (e.g. 2'-methylribonucleosides) in a CpG motif can suppress immunostimulatory activity because such modifications does not allow for the *proper recognition and/or interaction* of the CpG-motif with the proteins required in the immunostimulatory pathway (p. 4, lines 5+). The instant specification further discloses that the precise structural requirements and specific functional groups of CpG-motif necessary for the recognition of protein/receptor factor that is responsible for immune stimulation have not yet been studied in detail (p. 5, lines 23+). Note that different functional effects would be expected for different structures and the different structures of an immunostimulatory compound comprising a non-natural pyrimidine nucleoside C* would be endless. It is not clear from the instant specification what the required structure of a modified C* in a CpG motif is in order to retain the recognition and/or interaction with the proteins that are responsible for immune stimulation. Given no structure to function correlation is provided, the effects of a sequence comprising a modified C* in a CpG motif is unpredictable.

Given the breath of the claims and the lack of structure to function correlations of an immunostimulatory compound comprising a non-natural pyrimidine nucleoside C*, the claims are rejected for lacking written description support. The dependent claims fall herein.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 20, 21, 41, 42, 46 and 47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 7262286 in view of Chaix et al. (*Bioorganic and Medicinal Chemistry Letters*, 1996). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG and an internucleoside linkage wherein the G is a guanosine or analog thereof. Note that the '286 patent is drawn to a C* wherein the C* is a 5-hydroxycytosine, 5-hydroxymethylcytosine, N4-alkylcytosine and 4-thiouracil as instantly claimed. While this patent does not claim using a 3'-3' linker, it would have

been obvious to one of ordinary skill in the art at the time of the invention because Chaix et al. describe oligonucleotides linked via 3'-3' linkers have an increase resistance against nuclease-mediated degradation compared to 5'-3' linked oligonucleotides (see abstract).

Claims 20, 21, 41 and 42 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 7405285. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker. Note that the '285 patent is drawn to a G* wherein the G* is a 2'-deoxy-7-deazaguanosine as instantly claimed.

Claims 20, 21, 41 and 42 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 7427405. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker. Note that the '405 patent is drawn to a G* wherein the G* is a 2'-deoxy-7-deazaguanosine as instantly claimed.

Claims 20, 21, 41 and 42 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S.

Patent No. 7470674. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker. Note that the '674 patent is drawn to a G* wherein the G* is a 2'-deoxy-7-deazaguanosine as instantly claimed.

Claims 20, 21, 41 and 42 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 7498425. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker. Note that the '425 patent is drawn to a G* wherein the G* is a 2'-deoxy-7-deazaguanosine as instantly claimed.

Claims 20, 21, 41 and 42 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 7566702. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker. Note that the '702 patent is drawn to a G* is a modified guanosine as instantly claimed.

Claims 20, 21, 41 and 42 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 7595305. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker. Note that the '305 patent is drawn to a G* wherein the G* is a 2'-deoxy-7-deazaguanosine as instantly claimed.

Claims 20, 21, 41, 42, 46 and 47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 7 and 8 of U.S. Patent No. 7517862. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG, CpG* or a C*pG*, an internucleoside linkage and a 3'-3' linker. Note that the '862 patent is drawn to a G* wherein the G* is a 2'-deoxy-7-deazaguanosine and a C* wherein the C* is a 2'-deoxy-N4-alkyl-cytidine and this falls within the scope of a 7-deazaguanosine and a N4-alkylcytosine as found in claims 20, 42 or 41 of the instant specification.

Claims 20, 21, 41, 42, 46 and 47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 7407944. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an

immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG, CpG* or a C*pG*, an internucleoside linkage and a 3'-3' linker. Note that the '862 patent is drawn to a G* wherein the G* is a 2'-deoxy-7-deazaguanosine and a C* wherein the C* is a 2'-deoxy-N4-alkyl-cytidine and this falls within the scope of a 7-deazaguanosine and a N4-alkylcytosine as found in claims 20, 42 or 41 of the instant specification.

Claims 20, 21, 41, 42, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 31 and 148-149 of copending Application No. 10/757,345 (20040198685). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG, CpG* or a C*pG*, an internucleoside linkage and a 3'-3' linker wherein the G* is a 7-deazaguanosine.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21, 41, 42, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 9 of copending Application No. 10/694418 (20050026858). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG, CpG* or a C*pG*,

an internucleoside linkage and a 3'-3' linker wherein the C*, C, G* or G are either naturally occurring or non-naturally occurring nucleosides.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21, 41, 42, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18, 22-28 and 35-41 of copending Application No. 10/865245 (20050026861). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG, CpG* or a C*pG*, an internucleoside linkage and a 3'-3' linker wherein the C*, C, G* or G are either naturally occurring or non-naturally occurring nucleosides.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21 and 41 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18, 22, 26-28 and 35-41 of copending Application No. 10/865245 (20050130918). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker wherein the G* is a modified nucleosides.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21, 41, 42, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 16, 18-22 and 26 of copending Application No. 11/060228 (20050222072). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG, CpG* or a C*pG*, an internucleoside linkage and a 3'-3' linker wherein the C*, C, G* or G are either naturally occurring or non-naturally occurring nucleosides.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21, 41, 42, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11-13 and 16-17 of copending Application No. 11/153054 (20060014713). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG, CpG* or a C*pG*, an internucleoside linkage and a 3'-3' linker wherein the C*, C, G* or G are either naturally occurring or non-naturally occurring nucleosides.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21, 41, 42, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5, 8-10 and 19-37 of copending Application No. 10/892550 (20060074040). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG, CpG* or a C*pG*, an internucleoside linkage and a 3'-3' linker wherein the C*, C, G* or G are either naturally occurring or non-naturally occurring nucleosides.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21 and 41 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-6, 9, 10 and 12 of copending Application No. 11/173983 (20060217328). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker wherein the G* is a 2'-deoxy-7-deazaguanosine which reads upon the scope of a 7-deazaguanosine.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21 and 41 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4 and 10 of

copending Application No. 11/174450 (20060287262). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker wherein the G* is a 7-deazaguanosine.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21 and 41 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4, 10 and 14-16 of copending Application No. 11/641551 (20070219153). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker wherein the G* is a 7-deazaguanosine.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21, 41, 42, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 37-56 of copending Application No. 11/906781 (20080152662). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a C*pG, CpG* or a

C*pG*, an internucleoside linkage and a 3'-3' linker wherein the C*, C, G* or G are either naturally occurring or non-naturally occurring nucleosides.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21 and 41 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 14-19 of copending Application No. 11/876913 (20080193437). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker wherein the G* is a 2'-deoxy-7-deazaguanosine.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 20, 21 and 41 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-47 of copending Application No. 11/641590 (20080279785). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an immunostimulatory oligonucleotide compound or an intended use of such a compound wherein the compound comprises a CpG*, an internucleoside linkage and a 3'-3' linker wherein the G* is a modified guanosine.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

No claims are allowed at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELLE HORNING whose telephone number is (571)272-9036. The examiner can normally be reached on Monday-Friday 8:00-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. H./
Examiner, Art Unit 1648

/Zachariah Lucas/

Primary Examiner, Art Unit 1648